

Personal Versus Telephone Interviews: Effect on Responses

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TELEPHONE INTERVIEWS have practical and administrative advantages over face-to-face interviews, particularly when the respondents are scattered over a wide area. The telephone charges are likely to be more than offset by the savings in time and money spent by interviewers in traveling from one respondent to another, especially if the respondents are busy, not at home, or otherwise unavailable.

Several years ago Stouffer, commenting on the high cost of personal interviews, emphasized the need for determining how cheaper methods, such as telephone interviews or mailed questionnaires, could be substituted and under what conditions and with what results. "Some of this experience," he said, "has been quite encouraging, particularly with respect to telephone samples" (1).

There are, of course, limitations to the telephone interview as compared with the personal interview. Respondents who do not own telephones or cannot be reached by telephone are excluded. Moreover, some authors have argued that lengthy interviews in which the respondent

is asked about his attitudes on complex topics are not feasible by telephone. Parten, for example, states:

The [telephone] interview must be quite short, so only a few brief items can usually be investigated. . . . Studies in which the attitude of the informant is to be ascertained on the basis of his reaction to numerous questions should not be conducted by means of the telephone interview (2).

Seltiz and co-authors note that:

The telephone interview is particularly useful in obtaining information about what an individual or a family is doing (e.g., what television program he is watching) at the time of the call. Usually, telephone interviewing has to be brief and superficial to obtain the cooperation of the respondent (3).

Implicit in these statements is the argument that responses in lengthy telephone interviews about attitudes—even if they can be obtained—are not as good or as "valid" as responses collected in face-to-face interviews. My purpose in this paper is to compare the responses in these two types of interviews to questions to which the respondents—in this instance, physicians—may give answers that are consciously or unconsciously distorted or biased in the direction of social desirability or prestige enhancement (4).

That differences in the attitudes, expectations, and other characteristics of particular interviewers may result in systematic bias in the answers they obtain from respondents has been well documented (5). But differences in the interviewing situation—apart from differences

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among interviewers—may also produce bias (5a).

One way in which interviewing situations differ is in the degree of social involvement they permit between the interviewer and respondent. Hyman puts it this way:

To the extent that a respondent's reaction derives from social or interpersonal involvement [between himself and the interviewer], we may expect it to result in bias, since, under such conditions, the response will be primarily a function of the relation between the respondent and the interviewer, instead of a response to the task (5b).

Hyman continues:

Under what conditions is the social component of involvement increased? First of all, it is obvious that if we remove the "interviewer" from the physical environment, we decrease the possibility of respondent involvement with him as a personality. The case for self-administered questionnaires rests in part on this argument. It is frequently held that there can be no "interviewer effect" if there is no interviewer (5c).

If interviewing situations are classified in terms of the degree of "interviewer presence," and hence, the potential for interviewer-respondent involvement, the telephone interview falls between the face-to-face interview and the self-administered questionnaire. The telephone interview removes the interviewer from the view of the respondent, but it does not remove his voice; the self-administered questionnaire removes both; the personal interview removes neither.

In Hyman's review of studies comparing the personal interview and the self-administered questionnaire, he cites equally plausible arguments for the superiority of each approach in reducing bias. On the one hand, he says: "The social component of involvement [between interviewer and respondent] will be increased as the interviewer looms larger in the psychological field of the respondent. Obviously, we may expect that the respondent will be more sensitized to the 'interviewer' when the latter is physically present" (5d). Hyman adds that the respondent will also be more likely to give answers that are socially desirable and that will enhance his prestige in the eyes of the interviewer. On the other hand, "the very absence of an interviewer [in questionnaire studies] may act as a biasing factor. For in some respects the

interviewer might act as a check on tendencies among respondents to distort data in some way that will serve ego-needs" (5d).

Previous Studies

Although the results of comparing the interview and self-administered questionnaire methods are not consistent, most of the evidence supports the first of the two plausible but apparently contradictory arguments reviewed by Hyman, namely, that respondents are more likely to give socially desirable answers in a personal interview than in a self-administered questionnaire (5e).

A number of studies using the telephone interview have been reported in recent years (6-11). In some, the interviews were lengthy and questions were asked about sensitive topics. Studies in which personal and telephone interviews are compared, however, are scarcer, and their results are not consistent.

One study by Larsen (12) presumably supports the argument that the personal interview reduces prestige-motivated exaggeration by the respondent as compared with the telephone interview. But his conclusions are questionable. Larsen's data come from a study of message diffusion. On leaflets dropped by air, the reader was asked to check when, where, and how he got the leaflet and to mail it in. Respondents from the two test areas, however, were not randomly assigned to one or the other of the two methods of data collection. Instead, all of the respondents interviewed in person came from one neighborhood while all those interviewed by telephone came from another. Moreover, there is strong evidence that the two neighborhoods were different to begin with in the behavior against which the responses were validated, that is, in mailing in the leaflet.

A recent and more rigorously controlled study by Hochstim (13) does not support the results obtained by Larsen. Hochstim makes extensive comparisons of data collected by mail questionnaire, telephone interview, and personal interview from randomly selected subsamples in the population. Generally, the three strategies produced similar results. There were a few differences, however. To three questions on drinking behavior, women were a little more likely to say that they never drank wine, beer,

or whiskey in the personal interview than in the telephone interview or in the mail questionnaire. The telephone interview and the mail questionnaire gave almost identical results.

Hochstim attributes the difference in results between the personal interview and the questionnaire to an "impulsive type of face saving that is more likely to operate when confronting an interviewer who may possibly be critical than when filling in a mail questionnaire, where the situation is both more impersonal and more conducive to considered response." Since the telephone interview did not elicit any more denials of drinking than the mail questionnaire, however, it is possible that differences in the opportunity for considered response contribute less to differences in responses than does the degree of involvement between the interviewer and the respondent.

On two other questions dealing with discussions between husband and wife about women's medical problems, however, responses in the telephone interview were more like those in the personal interview than those in the mail questionnaire. "Positive" answers to both questions were reported most frequently in the mail questionnaire. Parenthetically, comparisons between personal and telephone interviews provide a more rigorous test of the effects of interviewer-respondent involvement than do comparisons between personal interviews and questionnaires. The interviewer "looms larger" of course in the personal interview than in the mail questionnaire where, in fact, he does not exist. But the personal interview and the mail questionnaire differ in other important ways which may influence responses, for example, in the length of time required and the order in which questions are answered. Personal and telephone interviews are more similar with respect to these factors.

Finally, for screening a population for self-reported visual impairment, Josephson found that telephone and personal interviews yielded equivalent results (14).

Methods

Study samples. The data for this paper came from two interview studies of physicians. The first, called here the "physicians' opinion

study," was a panel study of New York State physicians to determine changes in the ideology of the medical profession in response to Medicare (15-18). The second, called here the "medical conditions study," was a survey of the attitudes of physicians in five States toward reporting certain medical conditions to authorities. Physicians' responses in one of these five States, New Jersey, were compared according to whether the physicians were interviewed in person or by telephone. The National Opinion Research Center of the University of Chicago did the fieldwork for both studies.

In the physicians' opinion study, more than 1,600 physicians were interviewed between 1964 and 1967—1,007 of them twice, both before and after Medicare. Because of the expense of administering personal interviews to the large sample of physicians in widely scattered rural areas called for by the study design, interviews were done by telephone, except for a small, specially selected sample interviewed in person for comparative purposes (which is described later in this section) and a handful of other physicians who preferred to be interviewed in person. Interviews were completed with about 80 percent of the physicians selected.

The data in this paper from the physicians' opinion study came from the first wave of interviews conducted between January and April 1964. These interviews, which averaged about an hour in length, included questions on such topics as attitudes toward the participation of Government in medical care (including Medicare), and other political and health care issues, as well as standard background questions on the respondent's age, country of birth, religion, family background, and present income.

To permit comparisons between data from telephone interviews and personal interviews in the physicians' opinion study, subsamples of physicians in Manhattan and in one upstate county were randomly assigned to be interviewed in person or by telephone to a special group of 10 interviewers. Because this study was one of the first studies of physicians using the telephone method, I wanted to assess both the advantages and disadvantages of sending respondents the questionnaire before the interview. Accordingly, in the last of several pretests, a random half of the physicians in the

pretest sample were sent a questionnaire with a letter just before the interview, and the other half were sent only a letter. It was easier to ask the physician who had the questionnaire questions with long checklists of categories. These interviews also took 5-10 minutes less. These advantages, however, did not compensate for the risks—(a) a loss of control by the interviewer over the interview situation, such as control over the sequence in which questions are answered, and (b) the greater risk of “contamination,” namely, the likelihood of respondents’ showing the questionnaire to one another and discussing it before they were interviewed.

Each of the 10 interviewers was assigned roughly 10 interviews to be completed in person and 10 by telephone. Of the 188 physicians in this special sample, 140 were interviewed; 128 of the 140 interviews were completed by the interviewer to whom they had been randomly assigned and by the method randomly selected. It is the responses of these 128 physicians, 60 interviewed by telephone and 68 in person, that are compared in this paper.

In the medical conditions study, the total sample of 1,200 physicians (including 75 osteopaths) in New Jersey was divided into random halves. Half of the physicians assigned to each of the 42 interviewers in the study were to be interviewed in person and half by telephone. The interviews, which averaged about 45 minutes each, were completed between May and September 1965 with 83 percent of the physicians in the originally selected sample. As in the physicians’ opinion study, only the physicians interviewed by the originally assigned interviewer and according to the originally assigned method, or about 80 percent of the physicians with whom interviews were completed, are included in my analysis.

In both studies, each physician in the sample received a letter from his State medical (or osteopathic) society explaining the purpose of the study and that an interviewer would be calling for an appointment to interview him.

In both studies, physicians in the personal interview sample and the telephone sample were essentially similar in age, type of specialty, sex, marital status, and country of birth. Also, the proportions of the telephone and personal interview samples successfully inter-

viewed were roughly the same in both studies. The personal interviews, however, lasted a little longer than the telephone interviews, in part because there were more interruptions by patients and the physician’s office staff during the personal interviews.

The questions. From the physicians’ opinion study, 12 sets of questions to which answers were likely to be distorted in a greater or lesser degree in the direction of social desirability were selected for comparison. In most of these questions, the direction of social desirability was clear. For example, in questions on whether the physicians had taken any postgraduate courses in the past 3 years, on the number of medical journals they read regularly, and on the number of articles that they had published, it was assumed that respondents would tend to exaggerate their participation in such activities. Nevertheless, all 12 sets of questions were submitted to seven judges, of whom two were physicians and five were social scientists, all on the staff of a school of public health. The judges were asked to “indicate which of the available responses is more (or most) likely to . . . conform to what is considered ‘socially desirable’ (by the physician respondents).” There was almost unanimous agreement among those judges.

Judgments of social desirability should of course ideally be made by the interview respondents themselves. It is possible that the ratings of social desirability by the judges and by the physician respondents would not agree (19). In the medical conditions study, the respondents themselves did provide judgments of the social desirability of answers to some questions.

In the medical conditions study, five items were selected for comparison. Two items, in which the physician was asked which medical journals he read regularly and what his religious preference was, were similar to those in the physicians’ opinion study. In the other three items, the physician was asked whether he was willing to report 10 specified conditions to the authorities.

On the questions dealing with the physician’s willingness to report certain conditions, the responses considered socially acceptable were provided by the respondents themselves in a prior question, which read as follows: “In your opin-

ion, which of these conditions should always be reported to the public health authorities or police, which should be reported under certain circumstances, and which should not be reported?"

With the exception of two diseases, alcoholism and epilepsy, the majority of the physicians interviewed thought that each of the named conditions should "always be reported." Almost half thought alcoholism should be reported "under certain circumstances," about 10 percent thought that it should always be reported, and about 40 percent thought that it should not be reported. With respect to epilepsy, roughly one-third gave each of the response alternatives.

The physicians interviewed personally were more likely than the physicians interviewed by telephone to say in respect to eight of the 10 conditions that they should always be reported. The difference averaged about 3 percent. Although this difference is not a strong one, it raises the question as to whether the very expression of the social desirability of answers depends on the method of interview.

Results

In the physicians' opinion study, a higher proportion of the personal interview sample gave socially acceptable answers than the telephone interview sample in eight of the 12 items compared, a higher proportion of the telephone interview sample gave socially acceptable answers in three of the items, and the two samples tied in one item (table 1). These results are not statistically significant at the 0.05 level according to the sign test. (It is recognized that the observations are not independent, as required by the sign test.)

For the six measures with differences of more than 10 percent in any one category or combination of categories, the personal interview sample gave more socially acceptable answers in four items. Two of these four questions dealt with motivations for going into medicine (Q. 16a and Q. 17), the third with the number of journals read regularly (Q. 82), and the fourth with the number of articles the physician had published (Q. 83). In the other two questions with differences of more than 10 percent, one dealing with the legitimacy of charging higher fees to patients with insurance (Q. 77d) and one with the importance of religion in the phy-

sician's life (Q. 95b), the telephone sample gave more acceptable answers.

No readily apparent interpretation of this particular pattern of differences comes to mind. The largest differences, however, are in the two questions in which the respondents were asked to estimate, without the help of checklists, the number of scientific journals that they read regularly and the number of articles that they had published in such journals. The personal interview sample gave more socially desirable answers to both questions.

In the medical conditions study, as in the physicians' opinion study, the physicians interviewed personally reported reading more medical journals regularly than those interviewed by telephone (table 2). The number of journals reported in the medical conditions study, however, and the difference between the personal interview and the telephone samples were both considerably smaller than in the physicians' opinion study. In the physicians' opinion study, the respondents were asked only to estimate the number of journals read regularly, whereas in the medical conditions study they were asked to name them, a fact which may have acted as a brake on overestimation.

The respondents in the medical conditions study, unlike those in the physicians' opinion study, were a little more likely to state that they had no religious preference when interviewed personally than by telephone.

In the willingness of physicians to report the listed medical conditions to the authorities, there was essentially no difference in the responses of those interviewed personally and those interviewed by telephone. Those interviewed personally gave the more socially acceptable answers for nine items—only one of these differences, however, was statistically significant—and those interviewed by telephone gave the more socially accepted answers for 15 items—five of these differences were statistically significant (table 3).

This part of the analysis is restricted to the eight conditions which the majority had indicated, in answer to a previous question, should "always be reported." The physicians were asked about their willingness to report these conditions in three different situations. Would they report a child or a regular patient with

Table 1. Responses in personal and telephone

Question	Percent of sample		
	Personal (N=68) ¹	Telephone (N=60) ²	
10. In the past three years, have you taken any special courses or any other kind of post-graduate training, apart from occasional scientific lectures or meetings? (If "Yes") About how many hours altogether did you spend in these activities in the past three years—Was it less than 50 hours, or 50 hours or more?-----	+		
None.....	66	70	
Less than 50 hours.....	6	7	
More than 50 hours.....	25	23	
Don't know, no answer.....	3	0	
16a. IF "FATHER WANTED ME TO BE A DOCTOR" (Q. 16): What was the main reason your father wanted you to be a doctor—Was it because of the social prestige of a medical career, the chance to help people, the chance to do work of special interest to you, or the economic opportunity?-----	+		
Social prestige.....	24	24	
Chance to help people or work of special interest.....	40	29	
Economic opportunity.....	12	19	
Don't know, no answer.....	24	29	
17. a. Which of the following things was the most important to you then in your decision to go into medicine—Was it the social prestige of a medical career, the chance to help people, the chance to do work of special interest to you, or the economic opportunity? b. Which of these things was second most important to you then in your decision to go into medicine?			
MOST IMPORTANT	SECOND MOST IMPORTANT	+	
Social prestige or economic opportunity.....	Economic opportunity or social prestige.....	3	2
Social prestige or economic opportunity.....	Chance to help people or work of special interest.	2	3
Chance to help people or work of special interest.	Social prestige or economic opportunity.....	19	37
Chance to help people or work of special interest..	Work of special interest or chance to help people.	56	43
Don't know, no answer to Q. 17a and/or Q. 17b.....		21	15
18. a. What about the present—Which of these things is most important to you now—Is it the social prestige of a medical career, the chance to help people, the chance to do work of special interest to you, or the economic opportunity? b. Which of these things is second most important to you now?			
MOST IMPORTANT	SECOND MOST IMPORTANT		+
Social prestige or economic opportunity.....	Economic opportunity or social prestige.....	0	2
Social prestige or economic opportunity.....	Chance to help people or work of special interest.	3	3
Chance to help people or work of special interest.	Social prestige or economic opportunity.....	22	20
Chance to help people or work of special interest.	Work of special interest or chance to help people.	66	70
Don't know, no answer to Q. 18a and/or Q. 18b.....		9	5
19. Suppose physicians earned only half what they actually earned, would you have gone into medicine, or would you have gone into some other kind of work?-----	(No difference)		
Medicine.....	90	90	
Other kind of work.....	4	5	
Don't know, no answer.....	6	5	
77d. It is justifiable for doctors to charge higher fees to patients who carry medical insurance than to patients without insurance.....			+
Agree.....	15	8	
Disagree.....	78	90	
Don't know, no answer.....	7	2	
77e. Everyone in our society has the right to the best available medical care, whether he can afford it or not.....	+		
Agree.....	94	90	
Disagree.....	4	8	
Don't know, no answer.....	2	2	

interviews, physicians' opinion study

Question	Percent of sample	
	Personal (N=68) ¹	Telephone (N=60) ²
82. About how many scientific medical journals do you read regularly?-----	+	
None.....	3	2
1.....	2	7
2.....	6	7
3.....	15	15
4.....	23	25
5.....	10	23
6 or more.....	39	19
Don't know, no answer.....	2	2
Mean number of journals read regularly.....	4.9	4.3
83. Have you ever had an article published in a scientific medical journal? (If "Yes")		
How many?-----	+	
None.....	46	58
1.....	15	13
2.....	2	5
3 or more.....	37	22
Don't know, no answer.....	2	2
Mean number of articles published in journals.....	2.4	1.8
94. What is your present religious preference?-----	+	
Protestant.....	24	25
Roman Catholic.....	16	5
Jewish.....	50	53
Other.....	0	3
None (least socially desirable).....	9	12
Don't know, no answer.....	2	2
95. SKIPPED IF "none" TO Q. 94:		
a. How often do you attend religious services, would you say?-----	+	
Never.....	24	19
A few times a year or less.....	39	51
Once or twice a month.....	19	9
Once a week or more.....	14	17
Don't know, no answer.....	3	4
b. Quite apart from your attending religious services, how important would you say		
religion is to you—very important, fairly important, or not at all important?-----		+
Very important.....	23	34
Fairly important.....	47	34
Not at all important.....	26	24
Don't know, no answer.....	5	8

¹ Except in Q. 16a—where N=25, Q. 95a, where N=62, and Q. 95b, where N=53.

² Except in Q. 16a—where N=21, Q. 95a, where N=53, and Q. 95b, where N=62.

Procedures and Symbols Used in Tables

The most socially desirable response to each question in the tables is set in italics, with the exception of Q. 94 of table 1, Q. 31 of table 2, and the questions related to alcoholism and epilepsy in table 3. The symbol + indicates the interview sample more likely to give the socially desirable response, except in Q. 94 of table 1 and Q. 31 of table 2, where it indicates the interview sample less likely to give the least socially desirable answer.

The direction of these differences is determined as follows:

1. In Q. 82 and 83 of table 1 and Q. 28 of table 2, the mean averages are compared.

2. In Q. 16a, 19, 77d, and 77e of table 1, the single proportions representing the socially desirable response are compared. In Q. 94 of table 1 and Q. 31 of table 2, the proportions representing the least socially desirable response are compared.

3. In questions with more than two ordinal categories—Q. 17, 18, 95a, and 95b of table 1 and in Q. 5, 6a, and 6b in table 3, the direction is determined by *S*, used in computing Kendall's tau, a rank order correlation in which the cases in a category are counted as ties (20).

The symbol * in table 3 indicates a statistically significant difference at the 0.05 level. Significance is determined by the difference-between-means test, the difference-between-proportions test, or by an adaptation of Kendall's tau described by Smith (21), whichever is appropriate.

Although the "no answer" and "don't know" responses are presented in tables 1 and 2, they are excluded in determining the direction and the statistical significance of the differences between the personal and telephone interview samples.

one of these conditions to a public health agency, or would they report a regular patient with one of these conditions to the police? These questions provided 24 comparisons. The willingness to report alcoholism and epilepsy, which only a minority of the respondents thought should "always be reported," also did not differ according to whether the physicians were interviewed in person or by telephone.

Possibly a real difference between the telephone interview and personal interview samples in their willingness to report is obscured because the respondents' judgments as to what constituted a socially acceptable answer were not controlled. Among physicians who believe that measles should always be reported, those interviewed in person might be more likely than those interviewed by telephone to say that they "certainly" would report a case. Conversely, among physicians who believe that measles should not be reported, those interviewed in person might be more likely than those interviewed by telephone to say that they would "probably not" report it.

This interpretation was tested for the five conditions on which there was the most variation as to whether or not they should be reported—alcoholism, attempted suicide, drug addiction, epilepsy, and measles. When the physicians' responses as to whether each of these conditions should or should not be reported were controlled, there was no difference in the proportion of physicians who said they actually would or would not report that condition according to whether they were interviewed in person or by telephone.

The results obtained by the personal and telephone methods in the two studies were also compared by counting for each respondent the number of socially acceptable answers he gave. The differences between the means of the distributions according to the interview method used were negligible and in opposite directions in the two studies.

Finally, answers to questions in which social acceptability was less apparent were also compared in both studies. In the physicians' opinion study, there was little or no difference between the answers of respondents in the personal interview sample and the telephone interview sample to questions about their political ideal-

ogy, including their political party preference; about their attitudes toward governmental participation in medical care; or about their age and ethnic background and their father's occupation and education. In both the physicians' opinion study and the medical conditions study, there was little or no difference in physicians' answers to a question on their annual income.

Conclusion

There are essentially no differences between the responses of physicians interviewed in person and those interviewed by telephone. The degree to which the results reported here can be generalized is of course limited in obvious ways. The respondents in the studies examined were physicians—high prestige professionals to whom the telephone is a familiar instrument and who rely heavily on it in their daily work. Moreover, the questions asked were mainly about political and professional issues—government participation in medical care, the reporting of certain medical conditions to the authorities; a few questions were on such per-

Table 2. Physicians' responses in personal and telephone interviews as to number of medical journals read regularly and religious preference, medical conditions study

Question	Percent of sample	
	Personal (N=408)	Telephone (N=340)
28. Which medical journals do you read regularly? (Number listed)		
None.....	2	2
1.....	4	5
2.....	11	12
3.....	26	26
4.....	20	20
5.....	16	16
6 or more.....	16	15
Don't know, no answer.....	6	4
Mean number of journals read..	3.9	3.8
31. What is your religious preference?		
Protestant.....	31	31
Roman Catholic.....	28	29
Jewish.....	33	32
Other.....	2	3
None (least socially desirable)..	5	3
Don't know, no answer.....	1	2

sonal matters as religion, birthplace, and annual income.

The results justify the use of telephone interviews on both practical grounds—economy, time saved, and flexibility in scheduling interviews—and on methodological grounds—com-

parability of data with those from personal interviews. Additional controlled studies, however, are needed in which the telephone approach is compared with other methods of collecting data, the samples studied come from different socioeconomic backgrounds, the ques-

Table 3. Percentages of physicians in personal and telephone interviews who would report conditions, medical conditions study

Condition	Question 5 ¹		Question 6a ²		Question 6b ³	
	Personal (N=408)	Telephone (N=340)	Personal (N=408)	Telephone (N=340)	Personal (N=408)	Telephone (N=340)
Alcoholism: ⁴						
Certainly.....	15	18	6	7	5	2
Probably.....	11	13	11	10	9	12
Probably not.....	74	69	83	82	86	86
Attempted suicide.....		+		+		+
Certainly.....	30	35	19	21	51	51
Probably.....	14	11	13	13	23	20
Probably not.....	55	54	69	67	25	28
Diphtheria.....	+		⁵ +			*+
Certainly.....	90	89	90	90	1	3
Probably.....	4	3	3	3	(⁶)	1
Probably not.....	6	8	7	7	99	96
Drug addiction.....	+		+			+
Certainly.....	52	52	37	36	37	37
Probably.....	17	13	18	20	22	26
Probably not.....	31	34	45	44	41	38
Epilepsy: ⁴						
Certainly.....	28	30	29	29	8	6
Probably.....	14	14	16	14	6	5
Probably not.....	58	56	55	57	86	88
Gonorrhea.....		+		*+		+
Certainly.....	78	82	68	77	1	3
Probably.....	12	9	16	10	1	1
Probably not.....	11	9	15	12	98	96
Gunshot wound.....		+		+		*+
Certainly.....	46	46	28	27	94	87
Probably.....	4	7	4	6	5	9
Probably not.....	50	47	68	67	1	4
Measles.....	+		+			*+
Certainly.....	56	54	54	56	0	2
Probably.....	9	11	9	10	(⁶)	1
Probably not.....	35	35	37	33	100	98
Syphilis.....	+		+			+
Certainly.....	90	88	84	86	1	3
Probably.....	5	6	10	7	1	1
Probably not.....	5	6	6	7	98	96
Tuberculosis.....	+			*+		*+
Certainly.....	87	86	82	89	(⁶)	2
Probably.....	7	7	10	7	(⁶)	1
Probably not.....	7	7	8	4	100	97

¹ "Q. 5.—Suppose a child or adolescent (under 18 years old) came to your office with one of these conditions. Which would you certainly, which probably, and which would you probably not report to a public health agency?"

² "Q. 6a.—If one of your regular patients, an adult, came to your office with one of these conditions, which would you certainly report to public health, which would you probably report, and which would you probably not report to public health?"

³ "Q. 6b.—Which would you certainly, probably, or probably not report to the police if one of your regular patients came to you with one of these conditions?"

⁴ Alcoholism and epilepsy are included in this table but excluded from the main analysis because only a minority of the respondents thought that the conditions should "always be reported."

⁵ Slight difference is obscured by rounding of percentages.

⁶ Less than 0.5 percent.

tions asked relate to a number of topics and issues, and a variety of questionnaire designs are used.

Summary

Telephone interviews have practical and administrative advantages over face-to-face interviews, particularly if the respondents are scattered over a wide area. But it has been argued that lengthy telephone interviews in which the respondent is asked about complex topics are not feasible and that responses in attitude surveys conducted by telephone, even if they are obtained, are not as "valid" as those collected in face-to-face interviews.

Previous research has indicated that personal interviews are more likely to elicit socially acceptable responses than self-administered questionnaires because of the "social component of involvement" between interviewer and respondent. The telephone interview falls between the personal interview and the self-administered questionnaire in the opportunity for such involvement.

Data from two surveys of physicians show that there are essentially no differences in the proportions who give socially acceptable responses according to whether they are interviewed in person or by telephone.

REFERENCES

- (1) Stouffer, S. A.: Methods of research used by American social scientists. In *The behavioral sciences today*, edited by B. Berelson. Basic Books, Inc., New York, 1963, p. 72.
- (2) Parten, M.: Surveys, polls, and samples: Practical procedures. Harper & Brothers, New York, 1950, p. 87.
- (3) Selltitz, C., Jahoda, M., Deutsch, M., and Cook, S.: *Research methods in social relations*. Holt, Rinehart and Winston, Inc., New York, revised 1961, p. 239.
- (4) Edwards, A. L.: *The social desirability variable in personality assessment and research*. Dryden Press, New York, 1957.
- (5) Hyman, H. H.: *Interviewing in social research*. University of Chicago Press, 1954, ch. 1-4; (a) ch. 5; (b) p. 138; (c) pp. 138-139; (d) p. 139; (e) pp. 139-145.
- (6) Fry, H. G., and McNair, S.: Data gathering by long distance telephone. *Public Health Rep* 73: 831-835, September 1958.
- (7) Goldberg, D., Sharp, H., and Freedman, R.: The stability and reliability of expected family size data. *Milbank Mem Fund Quart* 37: 369-385, October 1959.
- (8) Bennett, C. T.: A telephone interview: A method for conducting a follow-up study. *Ment Hyg* 45: 216-220, April 1961.
- (9) Coombs, L., and Freedman, R.: Use of telephone interviews in a longitudinal fertility study. *Public Opin Quart* 28: 112-117, spring 1964.
- (10) Kriesberg, L.: *Mental health and public health personnel and programs: Their relations in the fifty States*. National Opinion Research Center Report No. 83. Chicago, 1962. Mimeographed.
- (11) Mooney, H. W., Pollack, B. R., and Corsa, L., Jr.: Use of telephone interviewing to study human reproduction. *Public Health Rep* 83: 1049-1060, December 1968.
- (12) Larsen, O.: The comparative validity of telephone and face-to-face interviews in the measurement of message diffusion leaflets. *Amer Sociol Rev* 17: 471-476, August 1952.
- (13) Hochstim, J.: Alternatives to personal interviewing. Paper presented at annual meeting of American Association of Public Opinion Research, Lake George, N.Y., 1963.
- (14) Josephson, E.: Screening for visual impairment. *Public Health Rep* 80: 47-54, January 1965.
- (15) Colombotos, J.: Physicians and Medicare: A before-after study of the effects of legislation on attitudes. *Amer Sociol Rev* 34: 318-334, June 1969.
- (16) Colombotos, J.: Social origins and ideology of physicians: A study of the effects of early socialization. *J Health Soc Behav* 10: 16-29, March 1969.
- (17) Colombotos, J.: Physicians' attitudes toward a county health department: Ideology and self-interest. *Amer J Public Health* 59: 53-59, January 1969.
- (18) Colombotos, J.: Physicians' attitudes toward Medicare. *Med Care* 6: 320-331, July-August 1968.
- (19) Scott, W. A.: Social desirability and individual conceptions of the desirable. *J Abnorm Soc Psychol* 67: 574-585, December 1963.
- (20) Kendall, M. G.: *Rank correlation methods*. Ed. 3. Hafner Publishing Co., New York, 1962, pp. 34-36.
- (21) Smith, J. E. K.: On the analysis of contingency tables with ordered classifications. Lincoln Laboratory, Massachusetts Institute of Technology, Cambridge. Mimeographed.